

JUL 10 2006

LSI Docket No. 03-0605

Claim Amendments

Please amend the claims as follows:

1. (Currently Amended) A multi-chip module (MCM) comprising:
a plurality of serial attached SCSI ("SAS") expander component circuits each having a number (n) of internal ports internal to the MCM and each having a number (m) of external ports for coupling to SAS devices external to the MCM; [[and]]
an internal fabric coupling together selected ones of the internal ports in selected ones of the plurality of SAS expander component circuits wherein the configuration of coupling together of the selected ones of the internal ports is static following initialization of the MCM; and
coordination logic communicatively coupled to the plurality of SAS expander component circuits to coordinate operation of the plurality of SAS expander component circuits wherein the coordination logic is adapted to present a unified expander to devices outside the module.
2. (Previously Presented) The module of claim 1 wherein the plurality of SAS expander component circuits comprises a number (N) of SAS expander components each having a number (n_N) of internal ports.
3. (Previously Presented) The module of claim 1 wherein the plurality of SAS expander component circuits comprises a number (N) of SAS expander components each having a number (m_N) of external ports.
4. (Original) The module of claim 1 wherein the internal fabric comprises a static fabric.
5. (Original) The module of claim 4 wherein the static fabric is configured at manufacture of the MCM.

LSI Docket No. 03-0605

6. (Previously Presented) The module of claim 1 wherein the internal fabric is initially configured at reset of the MCM.

7. (Previously Presented) The module of claim 6 further comprising: a control logic circuit to configure the internal fabric at reset of the MCM.

8. (Original) The module of claim 1 wherein the internal fabric comprises a programmable fabric.

9. (Original) The module of claim 8 wherein the programmable fabric is adapted to be configured by information received from a SAS device coupled to an external port of a SAS expander of the MCM.

10. (Canceled)

11. (Canceled)

12. (Currently Amended) The module of claim [[11]] 1 wherein the coordination logic is adapted to coordinate SCSI management protocol ("SMP") message processing logic within each expander of the plurality of SAS expander component circuits.

13. (Currently Amended) The module of claim [[11]] 1 wherein the coordination logic is adapted to present a single SAS address for the plurality of SAS expander component circuits.

14. (Currently Amended) The module of claim [[11]] 1 wherein the coordination logic is adapted to present a single set of PHY numbers for the PHYs of the plurality of SAS expander component circuits.

15. (Canceled)

LSI Docket No. 03-0605

16. (Canceled)

17. (Currently Amended) ~~The method of claim 15 further comprising:~~

A method for manufacturing a customized serial attached SCSI ("SAS") expander having a predetermined number of ports, the method comprising:

disposing a number (N) of SAS expander components on a multi-chip module (MCM) wherein each SAS expander component has a number (n) of internal ports internal to the MCM and wherein each SAS expander component has a number (m) of external ports for coupling to SAS devices external to the MCM and wherein the number N is sufficient to provide a total ports numbering ($m_N + n_N$) substantially equal to the predetermined number of ports;

disposing an internal fabric on the MCM;

configuring the internal fabric to provide desired routes between the total ports wherein following the step of configuring, the routes between the total ports remains static at least until the MCM is reset; and

disposing a control logic circuit on the MCM coupled to the internal fabric, wherein the step of configuring further comprises:

applying signals from a control logic circuit to the internal fabric to configure the internal fabric as a static fabric at reset of the MCM.

18. (Currently Amended) ~~The method of claim 15 further comprising:~~

A method for manufacturing a customized serial attached SCSI ("SAS") expander having a predetermined number of ports, the method comprising:

disposing a number (N) of SAS expander components on a multi-chip module (MCM) wherein each SAS expander component has a number (n) of internal ports internal to the MCM and wherein each SAS expander component has a number (m) of external ports for coupling to SAS devices external to the MCM and wherein the number N is sufficient to provide a total ports numbering ($m_N + n_N$) substantially equal to the predetermined number of ports;

disposing an internal fabric on the MCM;

LSI Docket No. 03-0605

configuring the internal fabric to provide desired routes between the total ports
wherein following the step of configuring, the routes between the total ports remains
static at least until the MCM is reset; and

disposing a coordination logic circuit on the MCM communicatively coupled to the SAS expander components to coordinate operation of the plurality of SAS expander components to present a unified expander interface to devices external to the MCM.